

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/048097 A3

(51) International Patent Classification⁷: G06F 9/48

(21) International Application Number:
PCT/IB2004/052397

(22) International Filing Date:
11 November 2004 (11.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/519,811 13 November 2003 (13.11.2003) US

(71) Applicant (for all designated States except US): **KONINKLUKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(71) Applicant (for AE only): **U.S. PHILIPS CORPORATION** [US/US]; 1251 Avenue of the Americas, New York, NY 10020 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BRIL, Reinder,**

Jaap [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL). **STEFFENS, Elisabeth, Frandsca, Maria** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

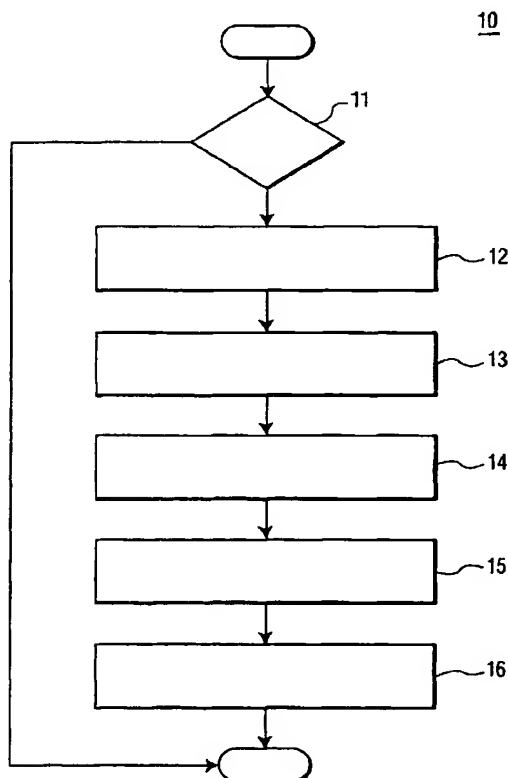
(74) Common Representative: **KONINKLIJKE PHILIPS ELECTRONICS N.V.**; Intellectual Property & Standards, c/o PIOTROWSKI, Daniel, J., P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR RESTRAINED BUDGET USE



(57) Abstract: A method (60) for controlling multiple tasks in a real-time operating system (110, 170) assigns priorities to two or more tasks (114, 115; 174, 175). A first task (114; 174) is assigned to be a More Important Task. A second task (115; 175) is assigned to be a Less Important Task. Each task is explicitly informed of its budget allocations. A Guaranteed Budget Margin is then allocated to the More Important Task along with a More Important Guaranteed Budget. A Less Important Guaranteed Budget is also allocated to the Less Important Task. At some point during execution, the higher priority or More Important Task (114; 174) may then determine that the More Important Task no longer requires the Guaranteed Budget Margin, in which case, a Conditionally Guaranteed Budget Margin is then allocated to the Less Important Task (115; 175).

WO 2005/048097 A3



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(Ui)) for all designations

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(U)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA,

Published:

— with international search report

(88) Date of publication of the international search report:

9 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.